

Abstract of the Disclosure

The disclosed devices provide a CMOS sensor and, more particularly, an enhanced CMOS sensor improving picture quality by concurrently performing a gamma correction and an analog-to-digital conversion. In an embodiment, there is provided a CMOS image sensor, having: an image capturing unit for converting rays of light incident upon a photo-sensitive area to an analog signal; an analog-to-digital converter for converting the analog image signal to a digital image signal; and a ramp signal generator for producing a ramp signal in order to provide a reference voltage signal to the analog-to-digital converter. The ramp signal generator may include: a) a plurality of capacitors and switches; b) an amplifier coupled to the plurality of capacitors and switches for receiving a gain and reset voltage from external circuitry; and c) capacitance controlling means coupled in parallel to at least one capacitor in the ramp signal generator in order to form the ramp signal for an analog gamma correction.